

What is claimed is:

1. A semiconductor device comprising:

an IC chip for wirelessly transmitting/receiving data;

electrodes formed on a front surface and a rear surface of said IC chip; and

a first conductor and a second conductor connected respectively to said electrodes,

wherein said first conductor and said second conductor are connected outside said IC chip to form an antenna.

2. A semiconductor device comprising:

an IC chip for wirelessly transmitting/receiving data;

electrodes formed on a front surface and a rear surface of said IC chip; and

a first conductor and a second conductor connected respectively to said electrodes,

wherein said electrode, formed on the rear surface of said IC chip, has the same potential as that of the substrate of said IC chip.

3. A semiconductor device comprising:

an IC chip for wirelessly transmitting/receiving data;

electrodes formed on a front surface and a rear surface of said IC chip; and

a first conductor and a second conductor connected

respectively to said electrodes,

wherein a slit is provided between said first conductor and said second conductor when viewed from a front surface side of said IC chip, and said first conductor and said second conductor are connected to each other.

4. A semiconductor device comprising:

an IC chip for wirelessly transmitting/receiving data;

electrodes formed on a front surface and a rear surface of said IC chip; and

a first conductor and a second conductor connected respectively to said electrodes,

wherein a slit is provided in said first conductor or said second conductor, and said first conductor and said second conductor are connected to each other.

5. A wireless identification semiconductor device comprising:

an IC chip for wirelessly transmitting/receiving data;

electrodes formed on a front surface and a rear surface of said IC chip; and

a conductor having a slit and including a first portion and a second portion connected to said respective electrodes.

6. The wireless identification semiconductor device according to claim 5,

wherein said conductor is bent and connected to said

electrodes.

7. The wireless identification semiconductor device according to claim 6,

wherein said conductor before being bent and connected to said electrode is accommodated in the form of a rectangular shape.

8. A method of manufacturing a semiconductor device, which includes an IC chip for wirelessly transmitting/receiving data, and an antenna connected to a front surface electrode and a rear surface electrode of said IC chip, the method comprising the steps of:

preparing a semiconductor substrate, on one main surface of which a plurality of device layers are formed;

forming a first electrode on each surface of said plurality of device layers;

grinding the other main surface opposite to the one main surface of said semiconductor substrate;

forming a second electrode on the grinded other main surface of said semiconductor substrate;

separating said semiconductor substrate into plural pieces to form a plurality of IC chips; and

connecting a conductor to be an antenna, to the first and second electrodes of said IC chip.

9. The method of manufacturing a wireless identification semiconductor device according to claim 8,

wherein, in the step of connecting a conductor to be an antenna, to the first and second electrodes of said IC

chip, said conductor includes a slit.

10. The method of manufacturing a wireless identification semiconductor device according to claim 9, further comprising the step of: adjusting a length of said slit with a processing machine.

11. A semiconductor device, comprising: an IC tag utilizing an IC chip for wirelessly transmitting an identification number,

wherein an image of information described on the surface of a medium to which said IC tag adheres is taken, and the identification number of said IC tag is read, and said IC tag is taken out, and the taken IC tag adheres again to the other medium.

12. An electronic commerce method of ordering and/or confirming a product, the method comprising the steps of:

receiving an identification number of a transponder attached to the product by the use of a cellular phone;

combining said received identification number of said transponder and a personal identification number of said cellular phone to create data; and

transmitting said created data to a server of a supplier of the product.

13. A transponder reader, comprising:

an interrogator for reading identification information from transponders attached respectively to a plurality of media; and

an upper connection machine for receiving said

identification information read from said transponders,  
wherein said interrogator successively accumulates  
the identification information of each of said transponders,  
and accumulates the identification information of all of  
said transponders and thereafter transfers them to said  
upper connection machine.

14. The transponder reader according to claim 13,  
wherein said interrogator compares, with the  
previously accumulated identification information, the  
identification information obtained in reading the  
identification information of one transponder and  
thereafter reading the identification information of a  
transponder adjacent thereto.